

Brush Creek are of poor quality and have limited aquatic resource functions on the airport expansion project property. Based on these findings, PTAA's project planning efforts concentrated on avoiding impacts to the Brush Creek bottomland hardwood area. Of the 24.18 acres of project impacts to jurisdictional waters and wetlands, only 7.26 acres of the Brush Creek bottomland hardwoods will be impacted; these impacts are the unavoidable result of the necessity for a taxiway crossing.

The complete avoidance of potential wetland and stream channel impacts associated with the project is not feasible given the required area of land disturbance and necessary facilities for airport operations associated with the proposed airport expansion project. In order to minimize unavoidable impacts, PTAA has: moved the air cargo site as far southwest as possible to avoid Brush Creek and associated wetlands; reconfigured the Old Oak Ridge Road/Bryan Boulevard interchange to minimize impacts to Brush Creek; redesigned the Old Oak Ridge Road/Bryan Boulevard interchange to include bridged ramps versus fill causeways within jurisdictional areas of Brush Creek; moved the proposed new runway southwest to minimize impacts to Brush Creek wetlands north of Bryan Boulevard; moved the proposed new runway to cross tributaries of the Brush Creek bottomland hardwood jurisdictional wetlands at their narrowest point; and moved the new taxiway crossing to the narrowest point of the Brush Creek bottomland hardwood jurisdictional wetlands. Furthermore, to offset unavoidable impacts to the Brush Creek bottomland hardwoods, PTAA's compensatory mitigation plan has maximized efforts to preserve, restore, and create jurisdictional wetlands within the Brush Creek bottomland hardwood forest located on PTAA property. Also, PTAA is incorporating water-supply watershed protection measures in the stormwater management plan specific to the project.

With respect to EPA's concern regarding the conceptual mitigation plan, the applicant submitted a proposed detailed mitigation plan, which was received on January 11, 2002, and advertised by public notice on February 6, 2002.

Subsequently, the EPA reviewed and provided comments for the proposed mitigation plan. The closing statement of the EPA's comments was that "It is the finding of EPA that the project, as proposed, may result in substantial and unacceptable impacts to aquatic resources of national importance. Therefore, it is contrary to 404(b)(1) Guidelines of the Clean Water Act." This comment was addressed as is outlined in the above discussion. The EPA did not provide any further comments in regard to this issue.

In response to comments received from the EPA, the Corps has reviewed the project impacts and mitigation measures taken by the applicant to adequately address the avoidance, minimization and mitigation concerns associated with the project. Accordingly, we concur with the findings of the FAA-FEIS and FAA-ROD that the project is indeed in compliance with the 404(b)(1) guidelines.

(c) The USFWS did not provide any comment.

(2) State and local agencies:

(a) The NCDWQ issued Section 401 Water Quality Certification No. 3428 on September 2, 2003, which was later modified on November 10, 2003, to include revisions to the mitigation plan that eliminated the three stream restoration projects on property owned by the City of Burlington and replaced them with stream and wetland mitigation at the

Causey Farm, limiting the mitigation for the project to predominantly on-site mitigation with only one off-site location.

(b) The North Carolina Department of Environment and Natural Resources, Division of Environmental Health, Public Water Supply Section (NCPWSS) submitted comments by memorandum received on October 10, 2000. The NCPWSS stated concerns for the large amount of earth disturbance and subsequent large increase in the watershed impervious area associated with the proposed project. They stated that the project is located in a small watershed that supports Greensboro's Lake Higgins reservoir, which is an important primary water supply reservoir located only three miles downstream of the proposed project. Also, the NCPWSS stated that the City of Greensboro has already stressed its available water supply, as evidenced during the summer of 1998.

The applicant was able to adequately address the concerns raised by the NCPWSS regarding surface water runoff generated from the new development; surface water it will be collected in stormwater detention ponds for treatment and attenuation, as required by the NCDWQ's Section 401 Water Quality General Certification 3428, initially dated September 2, 2003, and later modified on November 10, 2003. Groundwater recharge will occur within these detention ponds, with these ponds then discharging into either Brush Creek, Horsepen Creek or the East Fork Deep River. Large expanses of flat grassed areas will be constructed between the runway and taxiway areas in order to reduce runoff from new impermeable areas and for primary treatment of pollutants prior to reaching either the storm detention basins or streams located on the property. The applicant realizes that the proposed project would potentially further reduce the area's already inadequate water supply, due to decreased runoff and decreased infiltration. This concern was addressed in the water demand analysis prepared for the FAA-FEIS that determined the proposed project would not result in "significant impacts" to the area's water supply. Issues associated with the proposed airport expansion project and potential impacts to area water supply resources were considered and reviewed by the WQC. On October 9, 2002, the WQC issued a Major Variance to the State Water Supply Watershed Protection Rules for the proposed PTIA airport expansion project.

Accordingly, we concur with the FAA-FEIS that the project will not have a significant impact upon the water supply watershed issues raised by the NCPWSS.

(c) The North Carolina Wildlife Resources Commission (NCWRC) submitted comments by memorandum received on October 3, 2000. The NCWRC stated concerns regarding the use of culverts and recommended limiting their use as much as possible. For sites where culvert construction is unavoidable, NCWRC recommended that the culverts be designed to allow for fish passage, which requires that culverts be buried at least one foot below natural grade, utilize multiple culvert designs that direct flows into a single culvert to maintain sufficient water depth to facilitate fish passage, and installing baffle system construction in long culverts to trap gravel and provide resting areas for fish and other aquatic organisms. In addition, culverts should be situated so that no channel realignment or widening is required. Finally, riprap should not be placed on the streambed. The NCWRC also recommended the use of 100-foot vegetative buffers to minimize stream water quality impacts, while retaining some measure of wildlife habitat. The NCWRC expressed concerns for the lack of details concerning the proposed project mitigation. It expressed special concerns for the proposed Horsepen Creek mitigation site being in the construction corridor of a future NCDOT road construction project, which could negate the value of the mitigation site. The NCWRC suggested that if road construction did indeed reduce the mitigation value of the site, alternative on-site mitigation sites should be explored. Finally, following review of the published mitigation plan, the NCWRC

reviewed and provided comments for the proposed mitigation plan. Based on these latest draft plans provided, NCWRC expressed a concern that the road crossing of Horsepen Creek might involve approximately 200 feet of right-of-way that is excluded from the mitigation plan that would be constructed by NCDOT.

PTAA has committed to limiting the use of culverts as much as is practicable. Culverts that are unavoidable will be designed to allow for fish passage to the maximum extent practicable, incorporating the design recommendations of the NCWRC. With respect to the request for the 100-foot vegetated buffers, PTAA agreed to comply to the extent that it could while still maintaining consistency with FAA requirements. These requirements, located in FAA Advisory Circular No. 150/5200-33 concerning wildlife hazards, state that wildlife attractant features (such as these buffers) should not be located within 10,000 feet of aircraft movement areas. Therefore, PTAA will extend vegetated wildlife habitat buffers up to 100 feet wide on either side of streams not being impacted by the project, provided aircraft safety would not be compromised. In response to the issues NCWRC raised concerning PTAA's mitigation, a proposed detailed mitigation plan was received on January 11, 2002, and advertised by public notice on February 6, 2002. No further comments were received from the NCWRC concerning the project's proposed mitigation proposal. Finally, with respect to the realignment of Bryan Boulevard, PTAA will coordinate with NCDOT to address potential impacts associated with highway construction in regard to the implementation of the Horsepen Creek mitigation to ensure that the site's value is not negated or unduly compromised.

(3) Organizations:

The public notice received 7 letters of support for the project from local government agencies, 12 letters of support for the project from local commercial organizations, and 7 other letters of support for the project from other governmental bodies. All the letters of support referenced the economic growth, including the anticipated new jobs that the air cargo operations would bring to Greensboro and the Triad area.

(4) Individuals:

The public notice generated 12 letters of support for the project from area citizens. All the letters of support referenced the economic growth, including the anticipated new jobs that the air cargo operations would bring to Greensboro and the Triad area.

Mr. Dennis Borugian submitted comments by memorandum dated September 20, 2000, that expressed concerns for the airport expansion and air cargo facilities project. Specifically, Mr. Borugian stated an opinion that "The additional parallel runway is not necessary for any use other than that of one private company." Also, Mr. Borugian stated his opinion that the existing airport facility is currently operating at less than 20% utilization, and questioned the necessity of additional facilities.

The PTAA has provided information for our review that revealed that PTAA has planned the construction of an additional parallel runway and a cargo hub as main project elements since 1968 based upon its Master Plan dated 1968, updated in 1974 and again in 1994. PTAA's proposed client, FedEx, has simply expedited the need for the proposed airport facility expansion. The parallel runway is needed to provide runway redundancy for all airport users in the case of adverse weather or runway closure due to maintenance or incident. In addition, the parallel runway is needed to allow for the ability to conduct dual simultaneous independent operations and head-to-head operations on widely spaced parallel runways. The PTAA provided

further information for DA review that has shown that an analysis of existing PTIA capacity/utilization was conducted by the FAA using guidelines contained in FAA Advisory Circular 150/5060-5, Airport Capacity and Delay. The results indicated that the PTIA was operating at approximately 54% capacity/utilization in 1998. FAA planning guidelines for airports specify that when annual airport operations reach 60% of Air Service Volume (ASV), the airport sponsor should initiate planning studies to evaluate means of increasing capacity (FAA AC 5090.3B, Table 3-2) and when an airport reaches 80% ASV it should initiate construction of the capacity improvements. The results of FAA's analysis referenced above indicate that the 60% and 80% FAA planning guidelines would be reached at PTIA by 2001 and require construction of a new runway even without the introduction of the air cargo hub at PTIA.

Comments follow for the public notice dated February 5, 2002, that described the proposed compensatory mitigation plan dated January 11, 2002, for the PTIA airport expansion project. Based upon concerns expressed by the general public, state and federal resource agencies regarding the proposed project, the Wilmington District Regulatory Division determined that it was appropriate to solicit and accept comments of the submitted "Wetland and Stream Mitigation Plan" associated with the proposed airport expansion project, which would be included as part of the DA permit review.

1. Federal agencies:

(a) The National Marine Fisheries Service did not provide further comment after their letter dated September 21, 2000, which indicated that the resources affected are not ones for which they are responsible. Therefore, they have no comment on issuance of the permit.

(b) The EPA commented by letter dated February 28, 2002. In its response, EPA stated that it does not object to the proposed mitigation ratios stated in the plan. Finally, the EPA also stated that its review of the revised mitigation plans for Horsepen Creek and Brush Creek has satisfied its concern regarding wetland restoration areas being used as stormwater systems.

(c) The USFWS commented by letter dated March 1, 2003, acknowledging that the mitigation plan that was put on public notice represented considerable effort in addressing concerns it identified in earlier drafts of PTAA's proposed mitigation plans. USFWS stated its support for the design features that will be utilized to ensure hydrologic and biologic connectivity through unavoidable culverted crossings of jurisdictional waters and wetlands. The USFWS stated concerns about the success criteria for wetland vegetation. The USFWS stated that the revised plan did not contain the same level of detail for the offsite mitigation as it did for onsite mitigation.. Finally, the USFWS stated concerns regarding the mitigation ratios of the plan.

With respect to the USFWS' comments regarding mitigation success criteria to require 400 trees per acre surviving at the end of a 5 year monitoring period, it is noted that the mitigation plan submitted by PTAA for DA review has the success criteria that are required by the Wilmington District Regulatory Division guidelines, which requires that 260 trees of approved ratios and species composition per acre be surviving at the end of a five-year monitoring program. Disagreements with the guidelines are a separate issue that would require outside coordination between the Wilmington District Regulatory Division and the USFWS. The conceptual mitigation report for the offsite Causey Farm was received by the Raleigh Regulatory Field Office on March 25, 2002. The success criteria and guideline standards imposed at the onsite

mitigation is the standard for the offsite mitigation, as well. In regards to USFWS' concerns regarding the mitigation ratios, the DA review noted that its regulatory program provides for the use of ratios in determining the amount of compensatory mitigation necessary to offset impacts associated with proposed activities, based upon an identifiable rationale on a case-by-case basis. The DA regulatory program also recognizes the benefits of preserving wetlands that perform physical, chemical and/or biological functions, which would be important to the region in which the impact and mitigation site are located. The proposed preservation property is an exceptional, high functioning, mature bottomland hardwood forest, consisting of 69.9 acres immediately adjacent to the proposed development sites. Accordingly, the separation/buffering of the development from the downstream Lake Higgins water supply reservoir makes this property a valuable resource providing critical aquatic functions relative to the functions being impacted by the proposed project. Also, the surrounding development and land uses provide a demonstrable threat of future encroachments and degradation of the proposed preservation site and other restoration/creation sites. This anticipated threat of impact to aquatic functions places value in the inclusion of the remaining high quality wetlands and adjacent high-ground buffers associated with the mitigated jurisdictional areas. Based on this rationale associated with the aquatic impacts of the proposed project, the proposed ratios are appropriate. Along with the support of this finding provided by the EPA in their letter dated February 28, 2002, we find that the mitigation as presently proposed adequately addresses the mitigation needs associated with the project.

2. State and local agencies:

(a) The NCDWQ issued Section 401 Water Quality Certification No. 3428 on September 2, 2003, and later modified it on November 10, 2003 to address the elimination of the mitigation properties owned by the City of Burlington; instead, all of the mitigation will occur either on-site or off-site at the Causey Farm. The certifications are included herein at Attachment C.

(b) The North Carolina Wildlife Resources Commission (NCWRC) did not provide comment on the February 5, 2002, public notice. However, the NCWRC had provided earlier comments dated October 29, 2001, on earlier drafts of the mitigation plan. The NCWRC memorandum recommended that high ground buffers be provided for the mitigation sites. The January 11, 2002, mitigation plan addressed this issue with 50-foot high ground buffers when possible. The NCWRC stated concerns for impacts to aquatic passage that project culverts would present. The January 11, 2002, mitigation plan addressed this issue with design features that will be utilized to ensure hydrologic and biologic connectivity through unavoidable culverted crossings of jurisdictional waters and wetlands. The NCWRC stated their support for the proposed mitigation plan to include the preservation of Benaja Swamp located in Rockingham County on the Haw River basin. Although this property was considered, it was determined inappropriate for mitigation for the proposed airport expansion project since it did not have an adequate element of restoration or creation to mitigate for the proposed impacts. The Causey Farm site was determined to be more appropriate mitigation to compensate for those impacts which could not be mitigated for on PTAA property.

← 3. Organizations:

Mr. Demian A. Schane of Terris, Pravlik & Millian, LLP, commented by letter dated March 13, 2002. Mr. Schane provided several comments, which the Corps responded to by letter, and will also briefly respond to herein.

Comment: The mitigation plan improperly suggests that this project has been planned for years.

Response: While the applicant may not have planned expansion to occur in precisely the manner that it now proposes, plans to expand PTIA have been in existence since 1968. The Corps feels that, given our own lack of expertise in the area of airport expansion, the FAA is the appropriate agency to determine the applicant's purpose and need for the project. Our analysis of the FAA-FEIS indicates that FAA has done an adequate job of analyzing the purpose and need for the project. Our analysis of purpose and need has focused on the need for PTIA to impact waters of the United States in conducting its expansion.

Comment: The FAA and PTAA have failed to demonstrate that there is a need for this project,

Response: Again, we feel that the Corps is not the appropriate agency to provide a comprehensive analysis of airport location or design. With respect to waters and wetlands on the property, we feel that the applicant has shown that there is a need to impact waters of the United States in order to complete its project, and has adequately avoided and minimized impacts to those waters.

Comment: The FAA has defined the project purpose too narrowly.

Response: We feel the FAA has done an adequate job of defining project purpose.

Comment: The FAA failed to explore rigorously all reasonable alternatives.

Response: We do not feel qualified to second guess the determination by FAA regarding many elements of the airport expansion alternatives, as FAA is the appropriate agency to do such analyses and make such decisions. We also feel that it is important to note that PTAA, and not FedEx, is the applicant for this DA permit. As such, we are required to review those alternatives reasonably available to PTAA, and not necessarily those alternatives available to its potential client. As such, we feel that PTAA has rigorously explored all reasonable alternatives with respect to their impacts upon waters of the United States.

Comment: The mitigation plan is not sufficient.

Response: The mitigation plan has been reviewed by federal and state agencies, and all of their concerns with the proposed plan have been addressed to our satisfaction. We have determined, in compliance with our own regulations and guidelines, that the mitigation offered by the applicant and described in the mitigation plan is sufficient in quality, in location, and in appropriate ratios to mitigate for the impacts proposed. For more information about the mitigation, and the Corps decision, please see the discussion of mitigation and the response to comments of other agencies above.

Comment: The Corps should not issue the 404 permit until the PTAA completes its stormwater management plan.

Response: Stormwater issues are addressed in the NCDWQ Section 401 Water Quality Certification No. 3428, issued on September 2, 2003, and later modified on November 10, 2003.

4. Individuals:

The public notice generated 10 letters of concern regarding the project from area citizens. All of the letters repeated the same concerns. One of these concerns was that it was these citizens' understanding that the proposed wetland mitigation would occur outside of the Greensboro water supply watershed. We believe that these comments are a result of a misunderstanding, since approximately 96% of wetland mitigation acres and 78% of stream channel mitigation linear footage would be located on PTAA property within the Greensboro water supply watersheds of Brush Creek and Horsepen Creek. We believe that the applicant has made adequate efforts to insure that mitigation is done onsite and within the vicinity of the impacts as much as is possible.

Another stated concern pertained to surface run-off and stormwater associated with the proposed project. These issues have been addressed by the NCDWQ, who issued Section 401 Water Quality Certification No. 3428 on September 2, 2003 and later modified it on November 10, 2003. Part of the Section 401 Water Quality Certification includes the implementation of a NCDWQ approved stormwater management program, which would reduce the extent of runoff from impervious surfaces during stormwater events.

Finally, concerns for the monitoring of the mitigation areas were expressed. In response to this concern, we note that the success criteria for vegetation survival and makeup, wetland hydrology, and other issues, including prevention of prohibited activities within the mitigation areas, will be defined by the Corps and will be included as special conditions of any DA permit that might be issued for the proposed project. The Corps will monitor compliance of these special conditions including success criteria. An annual report of the monitoring will be compiled by PTAA and submitted to the Corps until the mitigation areas show five consecutive years of success. Any year's failure results in restarting the five-year review timeframe. Therefore, at a minimum, the mitigation areas would be closely monitored for five years to assure the successful functioning of the wetland and stream channel systems. These monitoring criteria are substantially similar to all of those used throughout the Wilmington District for projects of this magnitude. We believe that the monitoring requirements are adequate, and should provide the Corps with an accurate assessment of the success of the applicant's mitigation efforts.

V. Evaluations:

I have reviewed and evaluated, in light of the overall public interest, the documents and factors concerning this permit application, as well as, the stated views of other interested agencies and the concerned public. In doing so, I have considered the possible consequences of this proposed work in accordance with regulations published in 33 CFR Part 320 to 330 and 40 CFR Part 230. The following paragraphs include my evaluation of comments received and how the project complies with the above cited regulations.

A. Consideration of comments: In accordance with policy guidance from the office, Chief of Engineers, Regulatory Guidance Letter 92-1, Federal Agencies Roles and Responsibilities, I have fully considered all comments, and have determined that the applicant has selected the least environmentally damaging, practicable alternative.

B. Evaluation of Compliance with 404(b)(1) Guidelines (restrictions on discharge, 40 CFR 230.10): (An * is marked above the answer that would indicate noncompliance with the Guidelines. No * marked signifies the question does not relate to compliance or noncompliance with the Guidelines. A "X" simply marks the answer to the question posed).

REFERENCE APPLICABLE SECTION(S) ABOVE UNDER ANY CHECKED BLOCK:

i. Alternative test:

- 1) Based on the discussion in III B, are there available, practicable alternatives having less adverse impact on the aquatic ecosystem and without other significant adverse environmental consequences that do not involve discharges into "waters of the United States" or at other locations within these waters? *
Yes X
No

REFERENCE III.B.(4):

- 2) Based on III.B, if the project is in a special aquatic site and is not water-dependent, has the applicant clearly demonstrated that there are no practicable alternative sites available? *
X
Yes No

ii. Special restriction. Will the discharge:

- 1) Violate state water quality standards? *
Yes X
No

REFERENCE IV A.(1):

- 2) violate toxic effluent standards (under Section 307 of the Clean Water Act)? *
Yes X
No

- 3) jeopardize endangered or threatened species or their critical habitat? *
Yes X
No

- 4) violate standards set by the Department of Commerce to protect marine sanctuaries? *
Yes X
No

- 5) Evaluation of the information in III C and D above indicates that the proposed discharge material meets testing exclusion criteria for the following reason(s): *
X
Yes No

(X) based on the above information the material is not a carrier of contaminants.

() the levels of contaminants are substantially similar at the extraction and disposal sites and the discharge is not likely to result in degradation of the disposal site and pollutants will not be transported to less contaminated areas.

() acceptable constraints are available and will be implemented to reduce contamination to acceptable levels within the disposal site and prevent contaminants from being transported beyond the boundaries of the disposal site.

iii. Other restrictions. Will the discharge contribute to significant degradation of "waters of the United States" through adverse impacts to:

- | | | | |
|---|---|-----|----------------|
| 1) human health or welfare through pollution of municipal water supplies, fish, shellfish, wildlife and special aquatic sites? | * | Yes | <u>X</u>
No |
| 2) life stages of aquatic life and other wildlife? | * | Yes | <u>X</u>
No |
| 3) diversity, productivity and stability of the aquatic life and other wildlife or wildlife habitat or loss of the capacity of wetland to assimilate nutrients, purify water or reduce wave energy? | * | Yes | <u>X</u>
No |
| 4) recreational, aesthetic and economic value? | * | Yes | <u>X</u>
No |

iv. Actions to minimize potential adverse impacts (mitigation).

Will all appropriate and practicable steps (40 CFR 230.70-77) Be taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem?	*	<u>X</u> Yes	No
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The proposed revised work will result in the permanent, direct loss by discharge of 1,450,399 cubic yards of clean fill into approximately 24.18 acres of jurisdictional waters and wetlands, including 12,823 linear feet (1.25 acres) of stream channel and 22.93 acres of jurisdictional wetlands, of Brush Creek and unnamed tributaries of Brush Creek. The planned installation of box culverts should help to insure that flow and circulation patterns are not significantly altered. Functions provided by the filled stream channels and wetlands will be lost. However, PTAA proposes to provide compensatory mitigation for unavoidable impacts to jurisdictional waters of the U.S., including wetlands associated with the proposed airport expansion project, through the restoration, creation, and preservation of 101.2 acres of wetlands and the restoration, enhancement, and preservation of approximately 27,396 linear feet of stream channels, which comprises 96% and 78% of the onsite mitigation, respectively. [see III.B.(4)c].

Compensatory mitigation would be accomplished through a combination of methods and sites. On-site mitigation would involve work adjacent to Horsepen Creek, a perennial stream that flows through Longview Golf Course southeast of the airport, which would include the restoration of 2 acres through removal of fill material and creation of 12.6 acres of floodplain wetlands, along with the Priority I Restoration of 6,107 linear feet of stream channel. This would total 14% of the wetlands and 23% of stream channels associated with the project. Compensatory mitigation within the Brush Creek stream channel and bottomland hardwoods wetlands located on the north side of the airport property would include 69.9 acres of preservation, 7.4 acres of restoration through a combination of fill removal and plugging of ditches, and 5.3 acres creation of floodplain wetlands and the restoration of 200 linear feet of stream channel and preservation of 14,510 linear feet of stream channel. This portion of the mitigation totals 82% of the wetlands and 55% of stream channel.